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THE AMERICAN BEE JOURNAL

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THOMAS G. NEWMAN,

EDITOR AND PROPRIETOR.

Moving Bees in Winter.

As we have quite a number of queries about moving bees, and the best method of preparing them for shipment, we will give some directions, as we have often done before, but which seem not to have been seen by those who now send in questions on the subject. Mr. T. F. Kinsel, Shiloh, O., writes thus:

I am wintering my bees in the cellar. I expect to sell some, and move 6 to 8 miles soon, if it can be done with safety. How shall I proceed? We have good sleighing, and they could be drawn on a sled. Would it be better to wait until spring? Ought they to be placed in a cellar after removing, etc.? Will the unavoidable jotting in moving hurt them?

We cannot advise the removal of bees, in any manner, during a season, when they cannot have a good flight immediately afterward. We would much prefer running the risk of breaking down combs, in the early spring, over rough roads, than to risk their disturbance in winter. It *might* do to move them on a sled over the snow, but all the chances are against it.

Here is another letter, asking similar questions, from Mr. M. E. Buck, McLean, Ill.:

Bees have done well here during the past summer. The spring was very cold and backward. I commenced with 23 colonies, spring count, and increased to 50, by natural swarming. My bees are the natives, mixed somewhat with the Italians. I am using the Mitchell hive. I have taken 1,600 pounds of comb honey; a good part of it in one-pound sections. The greatest yield from one colony was 90 pounds in one-pound sections. For wintering, I am trying the plan of covering my hives over with hay or straw, on the summer stands. I want to ship my bees to Kansas. Would it do to ship by freight? Which is the best way to pack or fix them, where there are 50 or 75 colonies put on one car? Would it do to pack or heap them together? Is Kansas a good place for bees? I intend to go there and go into the business.

Some parts of Kansas are good for bees, as shown by reports from *some* bee-keepers there. The best time for shipping bees is in April, or quite early in May, before the combs are too heavy with brood; but with proper care in preparing them and ordinary usage in handling, they may be shipped at any time with comparative safety, except in cold weather, if properly prepared for the journey.

The first work of preparation is to go through the hives and extract about all the uncapped honey, as the least daubing will prove fatal to the bees; then procure a block 1 inch square, and as long as the hive is wide, in this cut notches and tack in the bottom of the hive, in which to place the frames to keep them steady; now select the new combs and those heavy with brood or sealed honey, secure them well in the frames with strip-binders, and place in the hive; tack the ends of the frames firmly to the rabbets on which they rest; dip the blanket in clean water, lightly wring, fold about six thicknesses, and lay on the front ends of the frames.

If the hive has no portico, leave off the cover, and use wire cloth instead, nailing on top of that, three one-inch strips, two inches wide—one across the center, the others across each end, to insure ventilation when piled on each other. Now tack wire cloth over the entrance, and your bees are ready for shipment.

If the hive has a portico, prepare in the same manner as above, except to bore a 1½ inch hole in each side of the brood chamber, and also in the cover, which will be used in place of the wire cloth over the frames; the holes to be covered inside and outside with wire cloth, to admit of ventilation. Leave the entrance open the full size, but cover the entire portico securely with wire cloth, leaving free access to it from the interior of the hive; care must be taken, however, to bore a 1½ inch hole under the roof-board of the portico, and left open, to allow free ingress to the interior of the hive, as the entrance beneath may become choked up, and the cluster of bees, with the queen, die of starvation through inability to get at the honey in the hive.

Hives made with porticoes are much better for shipping bees, for it allows them to drag out the dead, cleanse the hive, and, to a great extent, prevent dysentery. Prepared in this manner, full colonies may be shipped at all seasons, from May 1st until Aug. 10th, with perfect success. They should be sent by freight, and loaded with the frames running lengthwise of the car—the end of the frames pointing towards the engine. If packed in the car the other way, the "bumping" may break the frames down. Old and tough combs are best for shipping. Express charges are too high, usually, except for short distances.

Mr. G. Damkohler, Clarence, Mo., remarks as follows:

I intend to move to Florida in March, and as it may be quite cold here at that time, will you please to give some directions, in the BEE JOURNAL, how to prepare bees for shipment in winter? I heard, a few days ago, that a whole car load of bees passed through here, on their way South. Perhaps you know something about that shipment.

The trouble will be to prepare them for the journey so early. In Missouri there may be some warm days when you can do so, but here in the North, it would be too much to expect. To the foregoing general directions for shipping bees, we direct attention.

Here is another letter of inquiry from Mr. T. Thurlow, Lancaster, Pa.,

who asks about moving bees by rail in winter. He says:

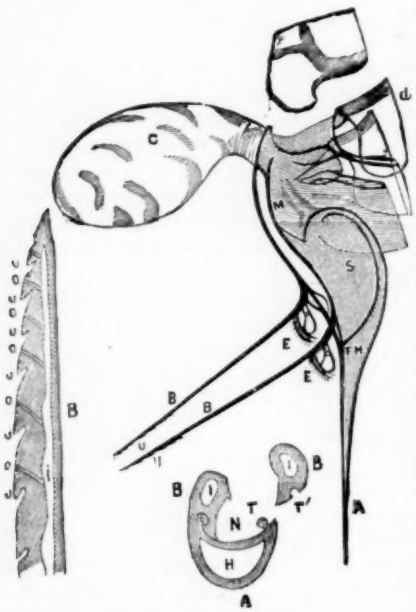
I am going into Maryland in February, a journey of 200 miles. My 14 colonies of bees are in double-walled hives, with chaff cushions on top. The question with me is, whether to leave the cushions on, or to fasten down the frames, take the cushions off and give them the whole cap to roam around in, with holes through the cap, covered with wire cloth. Which?

The answer given to the preceding questions will apply to this. We do not think it reasonable to expect weather warm enough to prepare bees for shipment during *this* month. If the weather was warm enough not to chill the brood, if they have it, it would be best to give the bees the cap to cluster in; especially would it be desirable, if the combs should break down, to give them space to cluster in, and thus, perhaps, save the entire colony.

The Sting of the Honey Bee.

A correspondent has sent us the following descriptive article on the above subject, taken from an English periodical entitled *Good Words:*

If we press the abdomen of a bee, so as to cause the sting to protrude, we should naturally think that the sharp, dark-colored instrument was



The Sting of the Bee.

the sting itself. This, however, is not the case. The real sting is a very slender instrument, nearly transparent, keenly pointed, and armed on one edge with a row of barbs. So exactly does the sting resemble the many-barbed arrow of certain savage tribes that, if the savages had possessed microscopes, we should certainly have thought that they borrowed the idea of the barb from the insect. What we see with the unaided eye is simply the sheath of the sting. Many savages poison their spears and arrows, and here also they have been anticipated by the insect. But the sting is infinitely superior to the arrow poison. No poison that has yet been made, not even the terrible wourali, or curare, as it is sometimes called, can retain its strength after long exposure to air. The upas poison of Borneo, for example, loses its potency in two or three hours. But the venom of the sting is never exposed to the air at all. It is secreted by two long, thread-like glands, not nearly so thick as a human hair, and is then received into a little bag at the base of the sting. When the insect uses its weapon it contracts the abdomen, thereby forcing the sting out and compressing the venom-bag.

By the force of the stroke which drives the sting into the foe, its base is pressed against the venom-bag and a small amount of poison driven into the wound. The barbed weapon cannot be withdrawn, and the whole apparatus of sting, poison-bag and glands is torn out of the insect, thereby causing its ultimate death.

The Honey Market in England.

The following letter will be very interesting to our readers:

There is not much English honey to be found on the market, even the largest producers, the most prominent bee-keepers, have had none to sell this winter. Mr. Cowan wrote me the other day, saying he had some in 1 lb. jars to offer at 1s. 3d. (30 cts.) per pound. English comb honey in sections of 1 lb. to 2 lb., bring from 1s. 6d. (36 cts.) to 2s. (48 cts.) per pound; but, even at these prices, it is very seldom 1,000 lbs. can be found in one parcel, or in even one neighborhood, so that if a firm confine themselves to English honey alone, they must, of necessity, be content with very small operations.

West India, Mexican, Chilian, etc., honey, in barrels containing from 250 lbs. and upwards to 600 lbs., have been selling at auction, upon Mincing Lane, at from 28s. per 112 lbs. (6 cts. per pound) to 46s. 8d. (10 cts. per pound). A parcel of 73 barrels of about 600 lbs. each, were shipped from Tuxpam, Mexico, to New Orleans, thence to Liverpool, and from Liverpool to London, by rail, consigned to Messrs. Geo. Hooper & Co., upon whom the shipper drew a 90 days draft through Messrs. Baring Bros., at the rate of 25s. per cwt., about 5½ cts. per pound, but the honey was simply filthy with dead bees, etc., so that Messrs. Hooper very properly declined to accept the draft. Messrs. Baring Bros. have, through their brokers, been hawking this honey about, and would, I think, be glad to close it out at 5 cts. This class of cheap, foreign honey has rather improved the market for finer grades, because buyers are getting so that they will not have the poor grades, at any price.

California honey has been in good demand; one sale, a large one, of Wilkins' honey, sold in Liverpool at 18 cts. per pound. There never was but one parcel of California comb honey brought over here, and that was a parcel of 100 cases by Messrs. Thurber & Co., but they sent it all back to New York two years ago, because it was badly broken, and had to be repacked, which only could be done there. We would gladly pay cash for the grade known in California as "Extra C.," 20 cts. per pound, net here. California strained, in 5-quart tins, and barrels of about 250 pounds, bring from 10 to 18 cts. per pound.

There has been but very little Western honey imported here, as yet. Nor has there been any honey without comb imported from the Eastern States. Before Christmas, we had about 1,200 cases in all; 700 from Boston, at 23 cts. per pound; 450 from Philadelphia, at 22 cts. per pound; and 50 from New York at 21 cts. per pound. It was all very satisfactory, and arrived safe and sound. We are now entirely out of the glass-sided boxes, and could sell many more cases, at from 28 to 30 cts. per pound, if they were to be had. We have been obliged to go to Hamburg, and buy from those fellows you have seen go around with a wooden tray upon their head, selling honey. We buy it from them in straw supers, and cut out the combs, for repacking in jars.

I wish you would come over next summer. We are to have the International Fisheries Exhibition here under the patronage of the Queen and the presidency of the Prince of Wales, and at Amsterdam, they will have a great International Exhibition under the patronage of the King of the Netherlands. At the latter there is to be a great honey show from all parts of Europe. You must come; you have been appointed one of the judges, Mr. Editor.

Now when you come, this time, you can arrange it to make some money. Bring over a consignment of comb honey, any shape, so it is white and nice. I will sell it all for you, so that you can take the money back in your pocket, and at a good profit. W. M. HOGE.

London, England, Jan. 11, 1883.

We should be delighted to do as Mr. Hoge suggests, but with a Weekly Bee Paper on our hands, it is impossible. Our last visit cost us over a thousand dollars, in money, besides months of valuable time, but we have the consolation of knowing that it was well spent in developing the market for American honey; now, some one else may go and reap the harvest. We would, were it possible.

☞ Attention is called to our *new* and liberal advertising rates for 1883.

Bee-Keeping in Egypt.

During the past year Egypt has been brought into prominent notice by the events of the war. It is one of the oldest countries, and is the "bridge" of three continents, Asia and Africa it links by land, and by the Suez Canal it lets European commerce through to the Indies and Australia. In it, the haughty Pharaohs have erected proud structures to perpetuate their names and deeds throughout all ages.

But what a sad contrast, between the land in its era of monuments, and Egypt of to-day! How fallen, since the time that Joseph sat on its throne next to Pharaoh. What shadows have cast their gloom over the land since that time! Perpetually under the domination of foreigners: the Assyrian, the Persian, the Macedonian, the Roman, the Arabian, the Georgian and Tartar slaves, and the indolent Turk. But its fertilizing waters still are pouring into the many tributaries of the White and the Blue rivers, to be wafted down and deposited by the Nile, in Lower Egypt. The once fertile valley of the Pharaohs, with its 4,000 towns and cities, can yet produce as perfect a flora, when properly irrigated. It is still the Eden of flowers. A correspondent, who has visited that country, says:

As a commercial country, it possesses many advantages: bees and honey still forming an important article of trade. The verdure of Upper Egypt generally withers at the end of four or five months, and commences earlier than in Lower Egypt. In consequence of this, the Lower Egyptians collect the bees of several villages, in large boats; each hive having a mark by which the owner recognizes it, they commence the gradual ascent of the Nile, stopping whenever they come to a region of herbage and flowers. At break of day the bees issue in thousands; and busily collect the sweets of the flowers, which are spread in luxuriant profusion around them, returning to their hives laden with honey, and issuing forth again in quest of more, several times during the course of a day. Thus, for three or four months, they travel in a land of flowers, and are brought back to the place whence they started, with the delicious product of the sweet orange-flowers, which perfume the Said, the roses of Faioum, and the jessamines of Arabia.

Nature still possesses her charms in the historic Valley of the Nile, which has always been the great magnet of the human race, as the land of natural resources. But the inhabitants are poor indeed—no better than slaves. The correspondent adds:

They not allowed to make use of corn and rice for food, since all that they can raise is demanded by their masters. Indian millet, forming a coarse bread, water, raw onions, sometimes a little *honey*, cheese, dates, and sour milk, form their constant, and only food. A shirt of coarse linen, dyed blue, and a black cloak, a cloth bonnet, with a long red handkerchief rolled around it, form their costume.

Such a population, dwelling in miserable hovels, moving among the monuments of ancient grandeur, awaken in the mind of the stranger a painful interest. The bees and their owners, like the pyramids, defy modern civilization, and, for management, as relentlessly point us back three thousand years ago. With their clay cylinders for hives, their keepers but mock at modern bee culture, and laugh to scorn the progressive ideas of the nineteenth century.

Judicious Use of Comb Foundation.

Mr. Sylvester Marshall, of Pratts' Fork., O., propounds the following questions:

Which is the best kind of comb foundation to use for getting extracted honey—drone or worker? How thick should it be to obtain the best results?

Drone comb foundation has been used, to some extent, but now it is entirely discarded; the worker-cell comb foundation answers every purpose, and as drone cells in a hive is a temptation to drone-rearing when such are not wanted, it is preferable not to have it there for any purpose.

Experience has demonstrated that comb foundation, for the brood chamber and extracting, should be about 4½ feet to the pound, with a thin base and heavy side walls. This is the most desirable for economy in the use of wax and rapidity of comb building by the bees.

Considering the start given to a colony of bees, by a judicious use of comb foundation, the certainty of having the combs all built straight, the ease with which the number of drones produced by a colony may be controlled, no one can justly intimate that we are not making prodigious strides in placing bee-culture among the scientific and profitable occupations of the present progressive age.

Sample Copies of the AMERICAN BEE JOURNAL will be sent *free* to any person. Any one intending to get up a club can have sample copies sent to the persons they desire to interview, by sending the names to this office.

Letter from Switzerland.

The talented and gentlemanly editor of the *Bulletin D'Apiculteur*, published at Nyon, Switzerland, Mons. Bertrand, writes us as follows:

I have sown at Nyon, on some land I purchased, 2½ acres of Bokhara clover seed, and nearly as much at my Mountain Apiary; so you see that I am following your advice in the editorial articles in the BEE JOURNAL. We could not do without your able JOURNAL, and this is the universal opinion.

We are sorry to learn that our friend and co-laborer has been unwell from excessive labor and cares, and hope he may speedily be restored to his accustomed vigor and health.

☞ We have received the initial copy of the *New England Apiarian*, published by W. W. Merrill, Mechanic Falls, Maine. In it we are assured that the publisher "is in no way connected with a former short-lived journal published in that place." Had this announcement not been made, it would generally have been considered but a revival of that paper which a year ago issued one number, but never succeeded in publishing another. As several of the Maine bee-keepers seem to be giving it their influence, we hope it may succeed. It seems to have progressive ideas, and the BEE JOURNAL wishes it prosperity, and extends its ☞ of welcome to the infant.

☞ The January number of the *Kansas Bee-Keeper* is on our desk, in an enlarged form. The "Question Department" is in charge of Mr. James Heddon, of Michigan, and Dr. Howard, of Texas, has become assistant editor.

How Birds are Deceived.—The woodpeckers in Norway bore into telegraph posts, being misled by the humming sound, to the belief that there are insects in the wood. The bears sometimes scratch away the heaps of stones put to support the pole, thinking that the noise proceeds from a nest of bees.

☞ May we ask you, dear reader, to speak a good word for the BEE JOURNAL to neighbors who keep bees, and send on *at least one new* subscription with your own? Our premium, "Bees and Honey," in cloth, for one *new* subscriber to the Weekly, or two for the Monthly, besides your own subscription to either edition, will pay you for your trouble, besides having the satisfaction of knowing that you have aided the BEE JOURNAL to a new subscriber, and progressive apiculture to another devotee.

For the American Bee Journal.

Profitable Use of Foundation, or Old Combs, when the Supply is Limited.

G. M. DOOLITTLE.

It often happens that the apiarist wishes to give each swarm, when hived, a start, in the way of frames filled with comb or foundation, but does not have enough of such to give a *hive full* to all the swarms he expects will issue, hence he wishes to give four or five frames to each, or near that amount. To this end he places his four or five frames of comb in the center of the hive, and fills out each side with empty frames, and places his swarms upon them.

As the queen has plenty of room to lay in these combs without the bees building more, she goes to work depositing eggs. As honey is coming in at the time, the bees must have a place to store it, so they fill the empty frames with stores, which are always of the drone size of cells, the same as they would build if hived in an empty hive with an old unprolific queen. Hence, the apiarist becomes disgusted with the use of old combs, and declares that they are of no use to swarms, as a colony not helped at all will accomplish more than does the swarm he has tried to help.

This was about the decision I came to, when first trying to use a limited number of combs for a swarm. Therefore, I decided to use a hive full of comb, or none at all. I soon found that these swarms hived on full sets of combs, so far surpassed those not helped at all, that I wished for a way to help all alike, if possible. I had also noted that by the use of the division board I could generally get from four to five frames filled with nice straight worker comb, after which I would get more or less drone comb built by a swarm having no help at all by way of frames of comb.

I studied on this matter during the winter, and the result was that the next season found me placing ten frames, each having a nice starter of worker comb along the top bar, in each hive; I placed a division board in the center, thus leaving five frames on each side. This division board did not come quite to the bottom of the hive, but allowed room for the bees to pass under it, as they desired. Into these hives I placed my swarms, and in whichever side the queen chanced to go, there the bees commenced work. As fast as the bees could build comb it was filled with eggs, hence, nothing but worker comb was built.

After the swarm had been hived 48 hours, I put on the boxes or sections, which were immediately taken possession of, thus securing the five frames filled entirely of worker comb; for if any drone comb was built, it was in the sections. As soon as these five frames were filled (which was readily ascertained by the bees commencing work in the vacant side of the hive), the frames in the vacant side of the hive were taken out and the division board moved to side of hive.

I next spread these combs apart, and put in each alternate space a frame of comb, thus securing a full hive of nice, straight worker comb. As I used only nine frames to the hive, this gave the swarm four empty combs.

I thus secured two objects, a hive full of all worker comb, and the bees taking possession of the sections in the shortest possible time. I have been so well pleased with it, that I have used it for years, and find it works equally well in using comb foundation where the apiarist does not feel able to buy enough to have a full hive of it for each swarm.

Borodino, N. Y.

For the American Bee Journal.

Central Kansas Convention.

On Thursday, Jan. 11, 1883, some of the bee-keepers of Kansas, met at Manhattan, to form an Association. Many were prevented from attending on account of the severe cold weather. Mr. Marlatt was called upon to preside; and on motion, the following persons were appointed a committee on permanent organization, with instructions to report at 2 p. m. on Saturday, Jan. 20, 1883, viz.: R. Corbett, Ed. Kimball and M. D. Waters.

On Saturday, Jan. 20, another meeting was held, and the report of the committee was made by its secretary, M. D. Waters, who presented a Constitution and By-Laws of the Central Kansas Bee-Keepers' Association, which was, on motion, adopted.

An election of officers for the ensuing year was then held, with the following result:

President, D. B. Himes.
Vice-President, E. Kimball.
Secretary, Thomas Bassler.
Treasurer, R. Corbett.

After some interesting discussions on several points of progressive bee-culture, the Association adjourned to meet at the call of the secretary.

THOMAS BASSLER, *Sec.*

For the American Bee Journal.

Chaff Hives and Upward Ventilation.

T. C. DAVIS.

It gave me much pleasure to see an article from the pen of Mr. Doolittle, on page 52 of the BEE JOURNAL, on this subject, because I am fully convinced that our safe wintering problem is to be solved by the chaff hive and its proper ventilation.

In the winter of 1880 and 1881, I had five of the A. I. Root chaff hives, and five others, of my own make, of the same size as the Simplicity, with fixed bottoms, and the ends double, with 3 inches of space filled with chaff. They had also double stories, put on the same as the Simplicity.

From the 20th of June until the first week in October of 1880, I was in Europe, and had no one to feed the bees during the dry spell we had in the early fall, so when they were examined in October, I found them rather weak and deficient in young bees. I had nothing to do but to pack them for winter, the best way I could, on their summer stands, in those hives. They were all put on four frames, in the middle of the hives, and the sides filled with division boards and chaff. Passages were made in all the combs, and passage ways were provided between the frames and the coverings, by laying small sticks across the frames. The coverings were made of an old ingrain carpet, that was once a good and thick one. Above that there were six inches of loose oat chaff, and a good chaff cushion, so that the upper stories were nearly full with chaff.

Four of those in the Root chaff-hives, wintered excellently, and came out, in the spring, strong and healthy without any help, except about a pound of candy made of sugar and flour, that was laid on the frames about the middle of March. In the other Root hive, they dwindled badly. They were uneasy and flew out continually, when the weather was not intensely cold, and died on the snow. It puzzled me greatly to know why this colony acted so different to the rest. I thought they were all packed exactly the same, and the entrances of all were closed the same, to about four inches.

After many fruitless examinations, I noticed that the carpet on this one, was not exactly the same as on the others. The other four were cut exactly the size of the hives, and they had raveled some at the ends. After putting them close to the front parts of the hives, they were rather short at the other ends, but not short enough to let the chaff fall in. The carpet on this one was an inch longer than the hive, and both ends were closed tight. When I found this difference, the carpet was turned back about ¼ of an inch, and a little straw laid on the opening under the chaff. From that moment the bees became more easy, and did not fly out as before. They came out all right, but I had to put them on two frames and helped them with some brood from other hives.

When the other five hives were examined, I found the carpets packed close, the same as the last mentioned, and a considerable dampness in the hives. I turned these carpets back, also, and filled up as before. The entrances of these were not more than an inch, and they were enlarged to 4 inches at once. They showed some signs of dysentery, and they dwindled some, but after this, the hives dried out some, and all came out strong and in good condition by the end of May.

During the winter of 1881-82 I had 15 of Root's chaff hives, and 3 of the others, packed in the same way, with the carpets turned back about ¼ of an inch at the back part, and the entrances of all the chaff hives left wide open. They all came out in splendid condition.

This winter, I have the 15 chaff hives, and 2 of the others, on their

summer stands, packed exactly in the same way, except that they are all on 5 frames, on account of their being very strong last fall. They are doing well so far, and there is not a particle of frost inside the entrances of any of them, in spite of the "cold snaps" we are having. I have also 8 others in a small, dark and well-ventilated cellar, doing well so far.

I never tried coverings of porous cloth over them, and it seems to me that Mr. Doolittle's experience speaks against it. But I believe that my experience with a warm quilt, or a carpet over them, proves that no upper ventilation will not do. It may be all right as long as the weather keeps really cold; but in my neighborhood, where we have sudden changes, and spells of moderate weather, in the coldest winters, it will not do. I do not know but ⅛ of an inch of an opening to the chaff at the back end of the hive, would be sufficient, but I am confident ¼ of an inch is plenty.

In this locality, bad honey in the fall, and pollen in the hives, does not trouble me in the least, and if I have all the Root chaff hives I need, and have my bees packed as I said, I have no fear of loss. The difference I find between the Root chaff hive and those I make myself for wintering, is, mine are more apt to get damp in the bottom, when the others are always dry, and that of course is greatly in their favor. There may be other hives quite as well as they are, but I have not seen them yet.

Pittsburgh, Pa., Jan. 26, 1883.

For the American Bee Journal.

Lorain Co., O., Convention.

The bee-keepers of Lorain County, Ohio, met in the Probate Court Room of the Court House at Elyria, Dec. 20, at 10 a. m. and organized a society under the name of The Lorain Co. Bee-Keepers' Association.

A constitution was adopted, similar to one in general use by other societies of the kind, with the following officers: President, Joseph Hudson; Vice President, C. D. Bennett; Secretary, O. J. Terrell; Treasurer, M. R. Bennett.

T. C. Crilly and C. D. Bennett were appointed a committee on statistics.

Adjourned till 1:30 p. m.

President Hudson called the meeting to order at 1:30 p. m.

Mr. Jump was called for but did not respond.

O. J. Terrell, being called for, made a few remarks in favor of organized work; he also spoke of the manner in which his bees were packed for the winter, namely, in clamps, with clover haff; also, that he would rather have our inches of clover chaff than ten nches of any other packing he could ithink of.

B. F. Worcester described a bee-house which he built, years ago, at the East, which wintered bees successfully, although the winters were very severe. It was made with very tight single walls, with ground floor, and ventilation at top and bottom. He considered the ventilation a very essential thing.

Mr. Tompkins said he weighed his bees in the fall and again in the spring, and the average loss per colony was about 7 pounds. One small nucleus, fed 20 pounds of granulated sugar-syrup, had gained 5 pounds.

The merits and demerits of the chaff hive were quite thoroughly discussed, the majority being in favor of the chaff hives.

The committee on statistics submitted the following table:

Apiaries.	No. of Colonies in Spring.	No. of Colonies in Fall.	Comb Honey, pounds.	Extracted H pounds.
1	60	75	1,500	....
2	20	26	425	....
3	69	100	3,450	....
4	11	25	400	....
5	20	30	400	....
6	12	18	300	....
7	5	13	400	....
8	13	19	240	....
9	7	12	300	....
10	11	15	200	600
11	21	47	500	....
12	60	73	2,000	1,000
13	15	22	225	325
14	3	8	250	....
15	1	2	....	....
16	5	10	180	....
17	14	24	568	220
18	5	11	....	165
19	6	9	....	250
20	9	14	400	....
21	1	3	....	....
22	1	3	50	....
23	7	14	120	....
24	2	2	50	....
25	1	3	45	....
26	4	6	50	300
27	100	125	4,000	....
28	7	11	60	....
29	13	18	822	250
30	6	11	154	....
31	20	20	500	....
32	5	13	....	800
33	5	15	200	....
34	1	2	....	....
35	8	8	75	....
36	13	7	278	....
37	79	75	3,300	200
38	2	6	140	....
39	4	4	90	....
40	22	49	112	1,400
	668	948	21,784	5,510

The question being asked whether it would pay to plant for honey alone, Mr. W. C. Sutliff replied that it would not, but there were plenty of crops that would yield both honey and good hay. He preferred alsike clover to anything he had tried.

L. L. Sears claimed something good for mignonette. It lasted till cold weather and was a wonderful plant to secrete honey.

J. E. Squires said, in speaking of the different races of bees, that he did not want anything to do with the Cyprians. Had had one large colony, and they were so cross that he gave the queen away, and divided the colony into four small nuclei, giving them Italian queens, which he claims are good enough for him.

The question was asked by a member, if it paid to keep bees? This brought forth a lively discussion, and it was thoroughly proved by several that bees, rightly managed, did pay.

Some effort was made to establish uniform prices for honey, but this was a vexatious question and will be more thoroughly discussed at the next meeting.

Mr. Geo. H. Purple exhibited a novel machine, which he makes use of, in taking a swarm of bees from a tree. The machine is so arranged that he can hang in it a frame of brood comb, so that the bees readily take to it.

The Association passed a resolution of thanks to the Probate Judge, for the use of his court room, and also to the county papers, which so kindly inserted the notice of the meeting in their columns the previous week.

On motion of B. F. Worcester, the meeting adjourned to the second Tuesday in March, 1883.

O. J. TERRELL, *Sec*

For the American Bee Journal.

Wintering Bees in the South.

FRANK THIAVILLE.

Wintering bees in the South is no trouble, if the bees are in proper condition, with plenty of bees and honey. A populous colony that has 25 pounds of honey on the 1st of November, will winter well on the summer stand, and be ready for the honey season when it comes.

An ordinary colony may winter well with 8 pounds of honey, provided the honey season opens early, say by March 1; but if the spring is cool and backward, they will perish, unless fed. During the period of repose, bees consume an average of 2 pounds of honey per month; but when breeding time comes, they require at first 2 pounds, then 3 and 4 pounds per week, according to the strength of the colony, and the quantity of brood that is being reared.

A critical time for our bees is when the honey season opens early, and is cut off, by frost and cool weather; our hives being then full of bees and brood, they must have honey, or the barrel of sugar must be ready.

Colonies well supplied with honey will remain quiet at home, and there is no spring dwindling; but, if they have not honey enough, they will fly out during the cool days, get chilled and perish, and the colony will dwindle, and even, if it can pull through, it is worthless for the season.

In the winter of 1880-81, no bees perished on the summer stands, so long as they had honey; but the spring was cool and backward, and a great many perished by the last of March, and first part of April, just at the eve of the honey season.

We are located between 34° and 35° north latitude. In the winter of 1880-81, the thermometer seldom went

down to zero; it was several times at 3° and 5° above at daybreak, but at noon it had raised to 29°. It was, for several weeks, at 10° and 12° above at daybreak, and 30° and 40° at noon; and about every week or ten days the bees had a flight.

Last winter, the thermometer did not sink much below 25° above zero at night, and at noon 60° to 75°.

Last Sunday, Jan. 21, was the coldest of the season; at daybreak it was at 9° above zero; and at noon 30°. Yesterday it was moderating; at daybreak 16°; and at noon 45°. To-day is pleasant, and bees fly if they want to.

In cool, hard winters I put my bees into a bee-house, or pack them with leaves and straw, for about 6 weeks, from Dec. 10 to the middle or last of January, and it saves honey. There is very little breeding at this date. This is an indication that we will have a late spring.

Forest City, Ark., Jan. 23, 1883.

For the American Bee Journal.

How to Market Honey.

G. W. DEMAREE.

Mr. James Heddon "publicly invites" me to write an article on the above subject. Of course he does not expect to be benefited by it himself, because he has already "got there." It is presumable, however, that he wishes to "prove me" as to whether I know anything about practical matters pertaining to bee culture. I write, then, in the hope of benefiting those who have had trouble to establish a market for their honey. I believe that there are many such, judging from the private inquiries I have received in the past.

Before I take up the subject, however, I wish to say that the article of Mr. Heddon, which contains the invitation before mentioned, though purporting to be a "clear" statement of his "position," shows "confusion worse confounded." His "second" proposition which, in fact, is the text of his discourse, is replete with error, and is marvelously superficial, when viewed from a historical and scientific standpoint. Of our native bees, uncontaminated with the blood of other races, I have noticed at least four varieties. While, of the Italian, the variety is "legion," hence, to confine the "long" or "shorter-bodied" specimens of the Italian to any imaginary variety of the race, is not only an error, but is an egregious blunder. The truth is, the long, slender-bodied specimens of the Italian race are superior to the short, thick-bodied specimens, no matter whether they are "dark" or "light." As far as my observation extends, the length of the body is in no way influenced by the color.

Mr. H. has not attempted to controvert a single important proposition that I have laid down, except in the way of *argumentum ad crumenam*—argument to the purse, "bread and butter." Is life a great "tread wheel," with its perpetual creaking under an unceasing tread? Even though the inevitable trough be filled with bread and butter, such a life is the meanest bondage that ever bowed the neck of man. If all of us should write on "bread and butter," who would be left to do the scientific thinking and writing?

In the "long ago" I kept some bees to supply our table with honey; and, even then, when I knew but little about bees, I loved to watch them as they bore their precious loads of nectar to their home—"sweet home." After the modern system of bee-keeping became a reality, I purchased some Italian bees and began to study their habits and natural history. Time went on, and my bees multiplied under good management, and soon we had honey for our own use and plenty to spare, and of this, I would send around to our neighbors, each a nice package, every once in a while. When a person wanted a "bucket" of honey I sold it to him.

I bought an extractor and produced both comb and extracted honey. I felt some anxiety to introduce the extracted article, but the chances looked bad at the start. My customers, when they came for honey, would say, "I want honey just like that I got from you last." I would show them the one-and-a-half-pound sections, and show them the article of extracted, and explain it all to them. It was all "wonderful and nice," but they must have it just like that they got from me before. Very well, then, I would say, just leave your buckets here and I will fill them in a few days. To fill these orders my nice section honey was cut out and the buckets were filled without bruising the combs more than could be avoided, and then the very best quality of extracted honey was poured into the buckets till every nook and corner was full. Put up in this way, a three gallon bucket will hold 35 pounds of our best white clover honey. These packages gave perfect satisfaction, and when these customers returned for more honey, they were pressing in their requests that the honey must be just like what they had been getting from me.

On one occasion, a good customer sent in 4 three-gallon buckets, and ordered them filled with honey "like he had been getting from me." At a venture, I filled 3 of them in the usual way, and the other I filled with the very best article of extracted white clover, so thick that it would nearly "stand alone." Being a pleasant fellow to deal with, he said nothing and paid the bill—20 odd dollars. The next season, his buckets came back with an order for 1 or 2 hundred pounds of honey like "that one bucket that had no wax in it." He had "put that bucket full aside till winter, and it was simply splendid, there were no pieces of hard wax to get into his teeth;" others were induced to try it, and it "took" every time.

Well, by and by, my little honey house became stored with more honey than my good little home market demanded, and I began to look out for a city market. I put some samples of nice section in the "show case," in a fancy grocery, in Shelbyville, and they stood there several weeks. They were "very nice," but nobody seemed to think that honey, in that shape, was made to eat. I then corresponded with a firm in Louisville, proposing to send them some sample crates of sections; also some extracted honey; explaining the whole thing to them, and setting a price on the honey, warranting the honey to be just as I described it, or they might return it, at my expense. They wrote me to send it on, and I sent them one crate of 32 sections and 2 sixty-pound kegs of extracted honey. In a few days I received a check for the price of the honey, and an order for more. I now had an outlet for all the crop that was not taken by the home market.

It is unnecessary to pursue the subject further, all large things have small beginnings. It takes skill and patience to create a demand for honey, in any locality, where the business is new, but when once the trade is established, it is as easy to sell honey as any other product for consumption. I insist that our local markets should be cultivated to the fullest extent, for we thereby lessen the competition in the city markets. The subject, pertaining to the "size of the packages," is interesting; but to create a demand for honey as daily food in the stead of the vile table syrups on the markets, is a matter of more interest.

Christiansburg, Ky.

Nebraska State Convention.

The Nebraska State Bee-Keepers' Association met at the Court House in Wahoo, and was called to order by T. L. VonDorn, President, on Jan. 11, 1883. Quite a large number of the members from various portions of the State were present.

Secretary Hawley read his annual report, which on motion was recived and placed on file. The treasurer, F. F. Caldwell, made his annual report, which on motion was referred to a committee on finance, consisting of Messrs. Trester, Rose and Jordan.

The bill of the Allen Printing Co., of Omaha, for 250 copies of the By-laws of the Association, amounting to $7.50, was allowed, and an order drawn on the treasurer for the amount.

Quite a number joined the Association, and members paid their dues.

The election of officers was postponed until 9 a. m. to-morrow.

On motion, the president was instructed to appoint a committee of one on statistics, and M. L. Trester, of Lincoln, was appointed as such committee.

Mr. Corbett, of Plattsmouth, called for a report from persons who had cultivated forage for bees. This led to a spirited and lively discussion regarding the successful growing of clovers and tame grasses in Nebraska, which was of great interest to farmers and stock raisers, as well as apiarists.

Mr. Stark, of Beatrice, said: I have sowed about 40 acres of red clover and it is doing well, and I have a good pasture. I plowed the ground, harrowed it until well pulverized, then sowed

the seed and rolled it. It blooms well and the bees work on it well. I pasture the field with cattle, and do not think there is any question but what clover can be grown successfully in Nebraska. I also sowed two acres of sweet clover, six pounds to the acre; seed cost 30 cents per pound.

Mr. Muir, of Brownsville, said: I have been in Nebraska since 1856, and my experience and observation lead me to conclude that the new soil of Nebraska will not produce good clover and tame grasses, but that as it becomes cultivated, and is cropped for several years, it will produce good tame grasses. As the soil becomes cultivated, it becomes more solid, the clover does not so easily winter-kill, and grows more thrifty; I consider white clover the best forage for bees.

Mr. Fletcher, of Wahoo, said he thought there was no doubt about raising clover in this State. He sowed 10 pounds of seed, two years ago, and now had 20 acres of good clover. He pastured the field, and thought that was the best way to insure a growth.

Dr. McAllister, of Columbus, said: A few years ago, white clover was sown in a few of the lots of that city, and was now spreading all over the streets and adjoining lots. He considered sweet clover the best honey-producing plant.

Mr. Myers, of Bellevue, said: Two years ago I sowed 20 pounds of clover seed on prairie sod, and on the north slope of a hill, the soil was new and had never been cultivated, and I have had a good field of clover there ever since; I think white clover would grow anywhere, if hogs were kept out of it.

Mr. Trester said: I have sown tame grasses and clover in Nebraska every year since 1862, and have never failed of getting a good crop but once, and then it was poor seed. My plan is to harrow the ground down smooth, then sow three or four kinds of tame grass seed mixed, and in about double the quantity that is recommended by the seed men. Then I harrow it thoroughly, and, when the first crop is ripe, I mow it and leave it upon the ground, and I have no trouble in getting the ground matted with clover by the second year. I have sown on sod and on cultivated land, and, I have no doubt but what tame grasses of all kinds can be successfully grown in this State.

Mr. Rouse, of Wahoo, said: Three years ago there was a pasture lot near my residence seeded to red clover, and, in a little, white clover appeared with it, and now it had nearly run the red out. I think all that is needed, to get forage for our bees, is to scatter white clover seed. I find that it even spreads on the prairie, where it has not ever been broken. I think that white clover always secretes honey in moist seasons, but in dry seasons does not.

G. M. Hawley said: I sowed white clover, seven years ago, and it winter-killed. Some has since been sown in the cemetery lot, which is growing and spreading; I think that, as the country becomes older and more cultivated, tame grasses will do better.

Mr. Corbett, of Plattsmouth, said: I am glad to see the turn this question has taken. I think clover will grow well in Nebraska. I have always had success, even when sown on the open prairie, without any preparation whatever; I have watched it in dry seasons, and do not see that it kills out. I think white clover does best when not shaded, and if it does kill out, some winters, it will return again. I think it secretes honey only in moist seasons.

It was nearly the unanimous decision that tame grasses of all kinds would grow well in this State, and that they were profitable crops to grow, and that white and sweet clover were excellent forage plants for bees, and could be easily grown. After the the close of this discussion, the Convention adjourned until 7 p. m.

The Convention was called to order by the president at 7:15 p. m. Quite a large audience of the citizens of Wahoo were present, besides the members of the Association.

Mr. T. L. Whitbeck, a member of the Saunders County Bee-Keepers' Association, made a very terse and well-timed speech of encouragement to the Convention, and the Hon. M. B. Reese, on behalf of the citizens of Wahoo and the commissioners of Saunders county, extended to the Convention a hearty welcome. Both speeches were responded to in a happy manner by the president, after which the Convention was favored with some excellent instrumental and vocal music by Miss Stocking, of Wahoo.

The question box furnished the following questions, which were discussed at length:

How far will bees go to pasturage? Various members gave it as their experience that they would go from three to seven miles, but all that was over two miles was lost labor.

How much honey will one bee gather in a life time? A bee lives but forty days, and it is estimated that one bee will gather a teaspoonful of honey during that time. Their average load is from 1⅛ to 3 grains.

Is it necessary to handle queen-cells carefully? It is. They should be handled very carefully, and always kept in their original position, head down.

Why do bees of queenless hives kill their young queens? Several reasons were given by bee-keepers, but it was thought that it was only a rare occurrence that they did so.

Will Alsike clover always produce honey? Mr. Rouse said that it did not, the first year of its bloom; but Mr. Hawley and Mr. Corbett thought that it did, and they had seen their bees working on it.

When bees are wintered in a cellar, is light an injury? Mr. Hawley did not think it was, if the cellar was kept at the right temperature, which, in his opinion, was 45 degrees; but he preferred a dark cellar, because the bees kept more quiet and did not consume so much honey as in a light one. Mr. Baird and Dr. McAllister had secured the best results in dark cellars. Mr. Turney, of Ceresco, wintered his bees in a light cellar, with screen over the portico of the hive, and always with success; he preferred a light cellar. Mr. Stark thought the darker the cellar and the more quiet they were kept, the better. Mr. Whitbeck had wintered bees in cellars, for 15 years, in Wisconsin; he kept the cellar dark, but well ventilated. At 20 degrees the bees consumed more honey, but it was less work to take care of them; at 30 and 40 degrees it was more work, but they consumed less honey. The general sentiment of the Convention was in favor of wintering in dark cellars, if cellar wintering was the method adopted.

With what and how would you feed a colony of bees that have no honey? To feed with candy was decided the best.

A few moments of conversation was held, when the Convention adjourned until Friday morning, at 9 o'clock.

Convention was called to order at 9 a. m. by the president, when the following were elected officers for the ensuing year: President, T. L. Von Dorn, Omaha; Vice-President, S. L. Thomas, Plattsmouth; Secretary, M. L. Trester, Lincoln; Treasurer, F. E. Caldwell, Bellevue; Finance Committee, C. L. Speice, Dr. McAllister and J. N. Heaton, all of Columbus.

The report of the finance committee on the treasurer's report was read and adopted.

A communication from the Hon. D. H. Wheeler, President of the State Agricultural Society, was read, and in compliance with a request therein, T. L. Von Dorn and D. H. Wheeler were appointed a committee to meet with the State Agricultural Society at Lincoln, to make arrangements for exhibits and premiums on honey at the next State Fair.

It was decided that it was not best to accept the invitation extended to hold the annual meeting of the Association with the annual meeting of the State Agricultural Society.

On the question of holding the next annual meeting, Lincoln received 12 votes, and Fremont and Nebraska City 8 each. The Executive Committee will decide upon the time and place of holding it. The secretary was instructed to notify all bee-keepers in the State by postal card of the place and date when decided upon, and invite them to attend, also to issue a call for statistics from the bee-keepers of the State, said call to be published in the newspapers of the State; also to notify delinquent members of the amount of arrearage in annual dues.

The president then delivered his annual address, as follows:

PRESIDENT'S ADDRESS.

I am glad to extend to you a kindly greeting. Another year, with its cares and labors, its joys and sorrows, its attainments and its failures, has passed, and been added to that long procession of the departed ages. We have again assembled to counsel together, to exchange experiences and thoughts, to lay plans for future action. We have a common interest, an

interest in each and every one of our co-laborers, an interest in keeping up apiculture to the highest standard. Let us, therefore, be prompt to advise, ready in council to advance our cherished pursuit.

There are but few things to which I shall call your especial attention this session, and these I hope will receive your careful consideration.

Owing to a season, exceptionally good, during the last half, in most of the Western States, a large surplus has been gathered, and large quantities have been thrown on the market by persons desirous of realizing at the earliest date. In consequence, prices have fallen, until they are less than the situation warrants, especially for comb honey. Added to this, there have been frequent shipments of inferior honey, and honey dew, which the shipper unable to sell at home, sends abroad to be sold at any price. This has still further demoralized trade and disgusted consumers.

With a view to freeing our markets from undue pressure, I have corresponded with several of the large dealers of this country, and also sent samples to England. The replies are here for your information. In this connection I feel warranted in saying, that if each producer would bring or send average samples of his honey to our State Fair for exhibit, that much might be done to market at that place.

I believe that a conference with the State Board of Agriculture would be of benefit to the producers and State at large. An agent for the sale of honey, in one or more of our largest towns, to retailers or jobbers, would also, in my opinion, benefit us all, in as much as one person could, by prudent measures, obtain fairer prices than a number making promiscuous sales, as is the practice now.

Next to injudicious sales, no one thing operates so much against the sale of good honey as the glucose traffic. This vile stuff, allowed by law to destroy health and sound business principles, is in one form or another upon the tables of the majority of American families. Never sold under its own name to the consumer, and ignorant of its effect upon health, its consumption is enormous. There is plenty of unimpeachable testimony, proving its total unfitness as an article of food, and I think we should leave no stone unturned to expose its true character.

I believe much can be done by our Association to place the facts before the people. But that which would deal it the deadliest blow, would be plenty of cheap wholesome honey. I am satisfied we can afford to sell our extracted honey at 10 cents per pound, and at that price it is within the reach, owing to its vastly superior flavor and sweetening qualities, of even the common laboring man. We can render no greater service to our State than to place a wholesome sweet within the reach of all its citizens.

While the exhibit at the last Fair was an improvement over all former ones, I am sorry to say it was by no means commensurate with our present status in apiculture. I am aware that to make an exhibit, necessitates an expenditure of both time and money, yet after attending three consecutive fairs, must unhesitatingly pronounce it a paying investment for any bee-keeper who produces for sale, even for a home market. Some practical measures, looking to a more general exhibit, would be very desirable. I believe the State Board of Agriculture will do all in its power to make our exhibit a success. They certainly merit our most sincere thanks for what they have already done.

With this communication, the second term of my office as presiding officer closes. Allow me to thank you, each and every one, for the very many kind words, wishes and deeds, you have bestowed upon me. Let me assure you that I thoroughly appreciate you all, and in the years to come the remembrances of these days will always be those of sincere and unalloyed pleasure. T. L. VONDORN.

Louis Trester, a youth of about 14 years of age, read the following report of juvenile bee-keeping:

Mr. President, Ladies and Gentlemen: My Pa told me if I would write my experience in bee-keeping during the past summer, I might go to the bee-keepers' meeting—so here it is: Sometime in June (about the middle, I think it was), I bargained with Pa for four frames covered with bees and filled with brood, for which I was to pay $1.00 apiece. When I went to get them, Pa said I might take one frame with a queen-cell on, as he had several of them. I took three frames, one with a queen-cell on, and left the fourth one, thinking, perhaps something might possibly happen to my cell or queen after she hatched, and I might want another. I took the three frames and put them in a hive and closed them in as small a space as possible, by means of a division-board. All went well, notwithstanding I took a peep into the hive every day to see that nothing happened the all-important object of the hive. In due time the cell was opened and a beautiful, yellow queen came forth, but my anxiety was not over yet, I still kept peeping into the hive nearly every day, to see if my treasure, as I deemed it, was still there. About the fourth or fifth day, I looked in my hive one evening, and could not find my queen. It was late, about sundown, and I thought such a young bird as she ought to be at home. I waited until dark and then closed the front of the hive, so she would not get out earlier than I, and, in the morning, when I looked, I found her ladyship as composed as if she had always been laying, and then I got my fourth frame and commenced to build up, by adding one sheet of comb foundation at a time, putting it in the middle of the brood chamber. When honey season began I had as strong a colony of bees as my Pa had in his apiary. I bought the top story containing boxes, which cost me $1.00, making a total cost of $6.35 for bees, hive, foundation, section boxes, and all complete. When I put on the second story the bees seemed to have no inclination to work in the boxes, so I put two frames with section boxes down in the brood chamber, and put four brood frames in the place the others occupied, and left them there about a week, and found that they were working in boxes both above and below; then changed all to their proper places, and then they worked readily, but after all my luck, and being a beginner in the bargain, I took from my four frames of bees, that I began with in the spring, 47 pounds of comb honey, and 53 pounds of extracted honey, leaving about 40 pounds to winter on. I sold my honey for $15 cash, leaving me a gain of $8.65 on $6.35 invested.

Remember, that I still have my bees, they are yet alive. Count them at what you please, if they come through all right, in the spring, my profits will be at least double, for I have not counted my bees at all in my report.

LOUIS TRESTER.

M. L. Trester read a paper on "Single-walled *vs.* Double-walled hives," which contained much for interesting thought by apiarists.

Adjourned until 2 p. m.

The meeting was called to order at 2 p. m. The president read some correspondence from abroad in regard to marketing and shipping of honey.

Shall we use separators? Not, for narrow sections.

Is it more profitable to run for comb or extracted honey? Extracted.

Will chaff hives pay? A difference of opinion.

Will basswood groves grow here? Yes.

Will the Rocky Mountain bee plant grow here? It will.

Resolutions were adopted thanking the citizens of Wahoo, and the railroads for courtesies, and then the Convention adjourned.

For the American Bee Journal.

Feeders and Wired Foundation.

JAMES HEDDON.

In response to Mr. Williams' inquiry regarding my feeders, and several private inquiries in relation to wired foundation, allow me to append the following: To describe the mechanical construction of my feeders, would be simply to make confusion worse confounded. Whoever has faith in it being the best shape and style of make-up, to embrace the vital points most desirable for a bee-feeder, and who may wish to make some like it, should by all means make from a sample. Just so with any article of merchandise in the bee-keepers' line. When you get a sample, do not be too fast to make "just a little alteration," because you think such change an improvement, or may not have just the right stock to work from, and "guess it will make no difference." Recollect, that while no one claims perfection, and that you might improve any apicultural article of merchandise, you will hardly, in a single day, get ahead of one who has pondered long over, and experimented for years, perhaps, with it.

Let me illustrate. My style of hive

and surplus case is, perhaps, as simple as any form now in use. It requires more thought to reduce complication to simplicity, than *vice versa*. Several farmers about here have taken samples of my hive and lumber to the shop where I hire my lumber cut, and by the samples hired theirs gotten out in the flat, then taken home and made up. By and by, I was solicited to go and make a bid on their bees, as they were positively "going out of the business." (They were never in it much.) I was glad to buy bees "in hives just like mine." I did buy them, and I, in every case, threw away the hives. In one case, the frames also had to go. I could not use anything about the botched-up concern. One man came 30 or 40 miles and left a sample and an order for 40 hives, all to be made up by the firm who does my cutting. Happening in, one day, and seeing them all up and painted, I removed the cover, and found that the owner had left orders so to do, and they had made all of them 2 inches deeper than the frames. That bee-keeper had a bottom air chamber theory, while the real practical air chamber was "on top," just under his hat. Well, the stock boards used were hardly wide enough, so, to make sure and have this new "air chamber" fully large enough, (so that the bees could build waste comb in it) the mill men stole ⅛ inch (only ⅛, that is not much) from the space above the frames. This reduced that space to less than bee height, and a yoke of oxen would be needed to pull off a cover, by and by. The owner was reported afterwards, when using these hives, to call on a name "more frequent than some would advise."

Please excuse me from the futile attempt to give a description of my feeders sufficiently clear to enable one to make them accurately by it. The Patent Office experts demand comprehensive drawings or models. In the first place, he who makes only a dozen or two, makes them at a greater cost than to buy them. He who wishes to make many, for sale or otherwise, should, and can well afford to pay five prices for a sample, and then make them just like that sample. My feeder does, and I think all feeders should, embrace the following principles: It never leaks. It never daubs a bee. No robbing is caused by its use. No heat is lost. No coming in contact with the bees when refilling, or ascertaining the progress of the bees, or emptying it. It can be used equally well at the entrance, but with a feeder properly made and adjusted, "top feeding" is much to be preferred. It holds about 2 pounds, and works very well for feeding full stores for wintering. When so doing I used 4 of them (which just covered my 8 frames, Langstroth hives), and 2 fillings (16 lbs.) I find ample to last from Oct. 1st to May 1st. I feed this amount in from 24 to 48 hours. The bottom of the feeder is a solid block, 2½x5x12¼, with saw cuts ¼ inch, cut into it, to hold the feed. The bees come up through one that is cut clear through, round over a lower partition, and fill up and retire below. These cuts are divided by thin partitions (that prevent daubing of the bees), and they are all connected by 3 holes crosswise at the bottom, so that as fast as you fill one space, all must fill. The whole is covered with a wire cloth, frame and board cover over all; and is well painted on the outside. Basswood is the best to make them of. As a bee-feeder for general use, they are good. As a supply, they are hardly worth bothering with. If feeding ever becomes a wholesale practice, something on the same principle of four times the size, will be used, I think. There is no patent on them.

All fears of damage to brood by fine tinned wire running through the base of the foundation, are now at an end. The use of such wire holds the full sheets in perfect position, while being drawn to perfect combs. The Given is our choice of all comb foundation. To make full sheets right, in previously wired frames, the press is a gem. A thing $500 would not tempt me to be without. An excellent article of brood foundation can be made with No. 36 tinned wire incorporated in it, vertically, every 2 inches, with the ends sticking out so that they can be put through holes, in, or on hooks previously attached to the frame, and all in apple pie order. But I think the better way is for each bee-keeper who has too few bees to own a press, to bore and wire his frames with No. 30 (coarser) tinned wire, and fasten the sheets of any unwired foundation to these wires, by the button hook process, which I may hereafter more fully describe. We have found the Given to be the best style of foundation for this hand-pressing on to wires; also the best utilized by the bees.

Our bees flew some yesterday, and just a wee bit to-day, and the prospects now are good for this time of the year; for the sun, the glory of earth, is now "returning on his silver wheels." He is coming to us again, with the old certainty; and whose eyes will he gladden more than those of the bee-keeper. We know he will raise the mist, cause the rain, grow and paint the nectar-laden flowers. His genial rays will not only warm our bodies but our minds. In the language of Southey,

> I marvel not, O Sun! that unto thee
> In adoration, man should bow the knee,
> And pour the prayer of mingled awe and love;
> For like a God thou art, and on thy way
> Of glory, sheddest with benignant ray,
> Beauty, and life, and joyance from above.

Dowagiac, Mich., Jan. 29, 1883.

For the American Bee Journal.

Kentucky State Convention.

Owing to the poor health of ex-Secretary Williamson, which prevented him from attending the last annual meeting of the Kentucky State Bee-Keepers' Association, but a very meager report of the meeting was published in the *Farmers' Home Journal* (and I have never seen that), and was not present at the meeting myself, but I understand that G. W. Demaree, of Christiansburg, was elected President and E. Drane, of Eminence, Secretary; W. Cook, Vice President; J. B. Nall, Treasurer; N. H. Lettell, Mr. Hofstatter and A. Snider, Executive Committee. The meeting stands adjourned to meet in Louisville at a time to be fixed by the executive committee, and not knowing the post office address of the committee, I take this plan to call their attention to the matter, hoping this may meet their eye and that they will take steps immediately to fix the time so that notice may be given in the papers. It is to be hoped that the bee-keepers in Kentucky and those in adjoining States will see to it that we have a rousing meeting. Let all bee-keepers attend, for it is to their interest to do so, and let their light shine; let all novices and beginners attend, that they may learn to make bee-keeping a success.

E. DRANE, *Sec.*

Eminence, Ky., Jan. 29, 1883.

For the American Bee Journal.

Do Bees Wound the Blossoms?

REV. M. MAHIN, D. D.

In the AMERICAN BEE JOURNAL of Jan. 24, 1883, I find an article by W. H. Stewart containing some things that should not be allowed to pass without some criticism and inquiry.

He holds "that bees wound the bloom of clover, buckwheat, linden, and in fact all other plants, before they are able to extract from them the desired sweet." But he does not offer any proof of his faith in this new doctrine. He does not tell us how the bee wounds the clover blossom. I have watched bees by the half hour, at least, gathering honey from clover, and I never yet saw one insert anything in the flower except its tongue; and any one who has ever seen a bee's tongne knows that it cannot wound anything. The idea that bees wound the flowers to get the honey is contrary to all observations of the structures of the flowers, and of the bees, and of the process of gathering the honey.

Mr. Stewart further says: "Mr. H. M. Morris, of Rantoul, Ill., lives where there is more corn than any other honey-yielding plants, and his bees store large quantities of corn honey each year. He finds that bees work very lively at the base of every leaf, and at every joint from top to root of the stalk. The truth is, that the rind of the stalk is the most tender at that point, and the bees mutilate the rind, making the stalk bleed, and then gather the sweet fluid."

I not unfrequently see something in the bee papers and elsewhere about "corn honey." But corn honey is a myth, except so much of it as is made at the glucose factories. People see bees working on corn tassels, and take it for granted that they are gathering honey; but they are not. There is no honey there to gather. I have sometimes watched bees working on all the varieties of corn grown in this country and I never saw a bee apply its tongue to the flower. The corn tassel has no organs for the secretion of nectar, and it is impossible for it to yield honey. Such at least is my firm

conviction, and will be, till proof of the contrary is presented.

But the bees mutilate the rinds of corn stalks! Well! well!! If that is so we will have to acknowledge that they can break the skin of a grape, and confess that we are liable to the grape growers for the damage to their crops, which we have claimed was done by birds, wasps, and, more than all, by the weather. But the thing is too absurd to be treated seriously. Surely, Mr. Stewart must be joking. If Mr. Morris ever saw bees sucking at the joints of corn stalks (I never did, and I was raised among corn-fields and bees,) the corn was infested with chinch bugs, or some species of plant lice. In very dry weather I have seen bees among the foxtail grass when the chinch bugs were working on it, but only one season.

Huntington, Ind., Jan. 24, 1883.

SELECTIONS FROM OUR LETTER BOX

Size of Hives and Frames.

How many square inches should there be in the brood chamber? What is the right distance between the frames (in the brood chamber), the frames being ⅞ in. wide? What is the size of sections that will hold 2, 3 and 4 lbs. of honey with separators.

Morven, Ont. W. R. HENWOOD.

[The brood chamber of the hive should be about 2,000 cubic inches, unless a smaller breeding apartment is required for the purpose of driving the bees into the boxes above, when running for comb honey.

The distance between frames, from centre to centre, should be a little less than 1½ inches.

The one-pound section for honey is 4¼x4¼x2; the two-pound section measures 5¼x6¼x2. Larger ones are now entirely out of date.—ED.]

Trial of Packing in Different Ways.

Some of my bees flew a little on Dec. 24th, and I swept the dead bees off of the bottom boards; on some there were more than I desire to see so early in the winter. I hope they will be able to have a cleansing flight before many more weeks. In my two-story hives there are no dead bees. I have 20 hives of bees, packed in different ways, on the summer stands. Those that have the honey above are now in the best condition.

Matteson, Ill. A. WICHERTS.

The Forties Below Zero.

We are having some very cold weather now. The temperature has been very low, continually, since the first week in December, but I shall not venture to tell you just the exact depth that has been reached; suffice it to say that it did go down to the forties below zero; the snow is about 2 feet deep, and somewhat drifted. As the cold dreary days and long evenings of midwinter pass stormily by, would not a bee-keeper have a thought occasionally about the welfare of his stock? I miss the little bees greatly, during the long term of their imprisonment. O how I should like to live in a land of flowers, where the music made by their tiny wings could be heard from the first to the last day of the years, as they come and go—time would glide so sweetly by. JOHN MORRIS.

Mauston, Wis., Jan. 25, 1883.

Rearing of Drones.

I started this spring with 5 good colonies, and increased to 15, by natural swarming. One swarm, coming out on June 17th, gathered 218 lbs. of surplus comb honey; all the others did well. In the BEE JOURNAL for Dec. 20, Mr. Morse speaks of taking frames of honey away and replacing them with frames of foundation. Do you consider that a good practice? What would be the consequences to use all foundation in the brood chamber? Where would they raise drones? Please answer through the JOURNAL.

Toledo, Iowa. H. L. FISHER.

[Mr. Morse mentions the plan of taking frames of honey from the hives, and putting in frames filled with comb foundation in their place. These are readily filled with eggs or honey, as the case may be, and the practice is a good one. The bees will be sure to make drone cells enough on the edges to obtain all they need. This plan is pursued to prevent, as much as possible, the rearing of drones.—ED.]

Home Market for Honey.

As there was an error in my report, I will give it as it should be: I started last spring with 9 colonies, and have increased them to 29 by natural swarming. I have obtained from them 500 pounds of honey in the comb, and also extracted 500 pounds. I realized from 15 to 20 cents per pound for it in my home market. The bees are all packed for the winter in a bee cellar.

F. A. GIBSON.

Racine, Wis., Jan. 25, 1883.

A Sample of Peculiar Honey.

I left with C. H. Lake a small bottle of honey to be forwarded to you to identify, if possible. The sample sent is ¼ clover honey, which does not alter the taste, but I had to add something to darken the shade, before the honey would sell. This honey is, when pure, about as clear as water—the lightest honey in the world, and, to my taste, the best. I took a small sample to the Cincinnati convention, hoping to get some information as to the source from whence derived, and was suspected of putting up "a joke on the convention" with "rock candy syrup." Dr. Miller said, "glycerine and sugar," Mr. Bingham proposed "honey dew," but I have had this same honey at the same time (June) for 3 consecutive years. This honey candies as white as the best lump sugar when extracted, but will not candy at all in the comb. Dysentery has commenced to show itself, but in hives with the lime protection I have failed to discover a trace of the disease. I should be pleased to have you try some experiments with the lime idea this winter (gratis). I do not claim a cure, but a preventive for dysentery, and if it is not what I claim, I want to know it at once, or as soon as possible, as I hope to solve the problem of "wintering on the summer stands" before I give it up. F. DELLA TORRE.

Baltimore, Md.

[The honey is candied solid, as white as cream, and very pleasant to the taste, but we cannot state definitely the source from which it was gathered; the white clover flavor seems to be overpowered, so that but little of its taste can be discovered in it. We shall be glad to publish the experiments of Mr. Della Torre with lime; we are not situated so that we can experiment with it now.—ED.]

Wood Separators,—Thin Boxes.

I have used wood and tin separators during the last 7 years, and now prefer the wood. Would like Mr. Ripley to give us more on the size of honey-box and also any others that wish, until we get a size that suits *merchants*, *consumers* and the *bees*. What *thickness* is best for the box? If boxes are 5 or 6 inches high, and 1 or 1¼ thick, holding 1 pound, would they be liable to fall down in handling, in retailing, etc. Has any one had experience with such thin boxes? If so, please report on the practicability of them. At present I use boxes 2 inches thick.

P. MOYER.

Hartstown, Pa., Jan. 29, 1883.

Comb Foundation a Great Help.

I had 18 colonies last spring, and I put into winter quarters 34 colonies. They did nothing till the middle of July; since that I obtained from them $100 worth of comb honey. I could not get along without comb foundation. I think it pays well to use it, as it saves the expense of separators. I have Italianized part of my bees, and like them much better than the blacks. ALFRED GALE.

Shelby, Ind., Jan. 23, 1883.

Two Queens in a Hive.

The hive was occupied by a colony of pure Italians, with a queen two years old, having her wings clipped. I had been giving my bees a good deal of attention, honey was coming in fast, and the bees were showing signs of swarming. About August 25th, I was passing the hive, when my attention was called to it, by seeing quite a large ball of bees on the alighting board. I pushed them apart and discovered the clipped queen in a dying condition. I took her to the

house, but could not save her. I thought I would try and find out what was the trouble, so I opened the hive and examined it thoroughly. I found the colony in good condition, with plenty of eggs, brood in all stages, and *also* a young, lively (and I believe fertilized) queen.

Cato, Mich. S. J. YOUNGMAN.

Buckwheat for Honey.

It is customary for farmers, in this section, to "summer fallow" a field intended for wheat the next year. This is done to enrich the land and clean it of foul weeds. How would it do to sow such a field with buckwheat as early as possible after putting on it the usual barn yard manure? Would it give the bees "a lift" in time to plow under about the middle of August, or would the hot weather kill the flowers for honey? Would it help smother out the thistles, etc.? Taking all together, would it be a good way to get honey, and yet help the field for a wheat crop? The experience of bee men is solicited.

JOHN YODER.

Springfield, Ont.

[Buckwheat, if sown about the middle of June, may be made to bloom about the middle of July, instead of in August as it usually does, but the honey is inferior both in flavor and color, and is generally undesirable for market. It would be far better to plant sweet clover for the bees, and it would not interfere with farming operations—as it can be sown in waste places, such as fence corners, road sides, etc.—ED.]

Double-Walled Hives.

The colonies of bees that survive the last week's blizzard are entitled to a chromo. For four days, last week, the mercury stood between 25° and 30° below zero. I am wintering 16 colonies out of doors, in double-walled hives, with dead-air spaces between the walls, made with building paper. If I have any success with them, I may give you a description of the construction of these hives, but if I succeed in freezing the 16, I shall doubtless remain as dumb as an oyster. JOHN CORSCOT.

Madison, Wis., Jan. 26, 1883.

Good Results.

I started, in the spring of 1882, with 3 colonies of hybrid bees. I increased them to 9, and took 375 lbs. of comb honey. L. W. GRAY.

Rushville, Ill., Jan. 22, 1883.

Yellow Sweet Clover.

Six weeks before the white variety bloomed, I noticed in my stack yard some of the yellow sweet clover in bloom. Like the white, it does not blossom the first year; but it commences to bloom about May 10th, while the white does not bloom until about June 20th. It gives twice as many blossoms as the white, and the bees work on it freely when the white is blooming by its side. I suppose the wild pigeons must have brought the seed to my yard.

S. P. SOWERS.

Dunlap, Kansas.

Bees Wintering Finely.

The bees are wintering finely, in the cellar, although it was the coldest weather we have had many years.

L. E. WELCH.

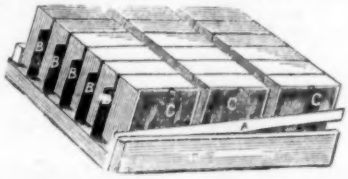
Linden, Mich., Jan. 24, 1883.

Comb Honey Rack.

Please describe, in the BEE JOURNAL, how to make a comb honey rack.

L. A. LOWMASTER.

[It would be very difficult to describe it so as to be understood by the ordinary reader. It will be far more satisfactory to get a sample and examine



it. The engraving shows one used with separators on the Langstroth hive.—ED.]

Sweet Clover, etc.

What parts of the country are the best for the production of honey? What proportion of advantage has a good timbered district over a prairie pastural region for bees and honey? Will sweet clover form a permanent sward, or does it die out when two years old, as I have heard? Will it continue in bloom nearly the year round in our most Southern States?

W. M. WOODWARD.

Wilmington, Ill.

[Any place near basswood timber, or where white clover abounds, would be good. In the absence of these you would have to depend on planting for honey, such as sweet clover, alsike clover, mignonette, cleome, figwort, etc. Sweet clover should be planted on the same ground two successive years, in order to obtain a continuous bloom. It blooms from June till frost, and will thrive on any soil and in any climate. A good timbered district has the advantage of being better protected from winds, and from many of the trees the bees obtain honey and pollen.—ED.]

Water Scarce and Wells Dry.

We are having the driest winter in Maine for many years; the rivers and lakes are very low, many small streams and shallow wells are entirely dry, and people are obliged to melt snow and haul water for daily use in house and barn. The weather is very cold and dry. Bees wintering nicely, so far as I know. We are reading up and getting ready for next year's work. I am reading "Langstroth on the Honey Bee." This book can never go out of use among bee-keepers. Why can it not be revised, and some additions be made, so as to bring it down to the present condition of apiculture? J. A. MORTON, M. D.

Bethel, Maine, Jan. 26, 1883.

[Mr. Langstroth has commenced a revision, but his health is so poor, that he may never finish it. It *is* an invaluable work, and will always find a place in every *good* library.—ED.]

Wintering Without Bad Symptoms.

I now have 500 colonies of bees; 460 out of doors, packed, and they have no bad symptoms, so far. It was 20° below zero, once, here.

JAMES HEDDON.

Dowagiac, Mich., Jan. 26, 1883.

Honey Plants of Florida.

What are the principal honey plants of Florida, and what part of the State is best adapted to bee-keeping.

Gardiner, Me. O. L. SAWYER.

[The principal honey plants are saw palmetto, cabbage palmetto, sweet gum, snow vine, sweet bay, basswood, mangrove, etc. Many portions of the northwest are good, but the south coast, a little north of the 29th parallel, is said to be unsurpassed for bee-keeping.—ED.]

Bees Packed are Doing Well.

Bees are wintering well so far, both in the cellar and out of doors, although we have had a very cold winter so far. I have some packed with clover chaff, on the summer stands. They are all right so far. I took a peep at them, one morning, when the thermometer was down to 28° below zero. They were dry and comfortable, with no ice inside of the hives. D. G. WEBSTER.

Blaine, Ill., Jan. 29, 1883.

Convention Notices.

☞ The Texas State Bee-Keepers' Association will hold its Fifth Annual Convention at McKinney, Collin Co., on Tuesday and Wednesday, April 17th and 18th, 1883; at the residence of Hon. W. H. Andrews.

WM. R. HOWARD, *Sec.*
Kingston, Texas.

☞ The bee-keepers of Northeastern Michigan are hereby requested to meet at the Dayton Hotel, in Flint, at 10 a. m. on Tuesday, Feb. 13, 1883, for the purpose of organizing a bee-keepers' association. All bee-keepers are earnestly requested to come, and to bring with them any apiarian articles of interest that they may possess. A free room, and reduced rates of board have been secured.

W. Z. HUTCHINSON.
Rogersville, Mich., Jan. 22, 1883.

☞ The Tuscarawas Valley Bee-Keepers' Association will hold a meeting in the Town Hall in Coshocton, O., on Feb. 14, 1883, at 10 a. m. Every bee-keeper is wanted at this meeting. Every one interested in bees or honey is requested to be present.

J. A. BUCKLEW, *Sec.*, Clarks, O.

☞ The next meeting of the Haldimand, Ont., Bee-Keepers' Association will be held at Nelle's Corners on Saturday, March 31, 1883, at 11 a. m.

H. CAMPBELL.

☞ The Western Bee-Keepers' Association meets at Independence, Mo., April 28, 1883.

S. W. SALISBURY, *Sec.*

☞ The Northeastern Ohio and Northwestern Pennsylvania Bee-Keepers' Association will meet at Andover, Ohio, to hold their annual convention, on the second Wednesday and Thursday of February, 1883.

C. T. LEONARD, *Sec.*

Examine the Date following your name on the wrapper label of this paper; it indicates the end of the month to which you have paid your subscription on the BEE JOURNAL.

For safety, when sending money to this office get either a post office or express money order, a bank draft on New York or Chicago, or register the letter. Postage stamps of any kind may be sent for amounts less than one dollar. Local checks are subject to a discount of 25 cents at Chicago banks. American Express money orders for $5, or less, can be obtained for 5 cents.

We wish to impress upon every one the necessity of being very specific, and carefully to state what they desire for the money sent. Also, if they live near one post office, and get their mail at another, be sure to give us the address we already have on our books.

Honey and Beeswax Market.

OFFICE OF AMERICAN BEE JOURNAL,
Monday, 10 a. m., February 5, 1882.

The following are the latest quotations for honey and beeswax received up to this hour:

Quotations of Cash Buyers.

CHICAGO.

HONEY—Extracted, dark 7c. light, 9c. here.
BEESWAX—It is quite scarce. I am paying 30c. for good yellow wax, on arrival; dark and off colors, 17@25c.

AL. H. NEWMAN, 923 W. Madison St.

CINCINNATI.

HONEY—There is no excitement in the honey market, but sales are fair to our regular trade. Offerings are plentiful of extracted and comb honey. Extracted brings 7@9c. on arrival. The sales of comb honey are very slow, although there is a large supply of first-class quality on the market. It brings 12@18c. on arrival.
BEESWAX—Comes in slowly and brings 20@30c. per lb., according to quality. CHAS. F. MUTH.

Quotations of Commission Merchants.

CHICAGO.

HONEY—The past month has not reduced the stock of comb or extracted honey, the receipts having been larger than the amounts taken for consumption. Prices are weak and irregular, ranging from 16c. to 18c. for white comb in the smaller frames; dark, very little selling, offered at 12½c. to 14c. Extracted, 8c. to 10c., according to color.
BEESWAX—32@33c. per lb. for good.

R. A. BURNETT, 161 South Water St.

SAN FRANCISCO.

HONEY—The market is at present stagnant. Offerings are not large, but they are receiving no attention from buyers.
White comb, 17@20c; dark to good, 11@13½c; extracted, choice to extra white, 8½@9½c.; dark and candied, 7@8c.
BEESWAX—We quote 25@28c.

STEARNS & SMITH, 423 Front Street.

ST. LOUIS.

HONEY—Strained, at 6@7½c., was salable—one lot of 17 bbls. bringing inside figure; but comb, very dull at 16c. to 18c.; and extracted do., 8@9c.
BEESWAX—Steady; choice, 27@27½c.; dark, 20@22c.

W. T. ANDERSON & CO., 117 N. Main Street.

CLEVELAND.

HONEY—Is very slow, just now hardly anything selling, stock on hand quite liberal. Sales slow at 19@20c. for best white 1-lb. sections; 18@19c. for 2-lb. Second grades not inquired after. Extracted very dull at 9@10c. in bbls. and 11@13c. in cans.
BEESWAX—Scarce, 28@30c.

A. C. KENDEL, 115 Ontario Street.

NEW YORK.

HONEY—Choice to fancy white clover honey continues scarce and firm, but buckwheat and extracted honey slow and irregular.
We quote: White clover, first quality, 1 lb boxes, 24@25c; fair to good, 22@23c.; buckwheat, 15@17c. Extracted, clover, 10@13c.; buckwheat, 9@10c.
BEESWAX—Only small lots of wax are moving, but the supply is light and prices held firmly for prime.
Western pure, 30@32c; southern, pure, 31@33c.

D. W. QUINBY, 105 Park Place.

BOSTON.

HONEY—Our market is fairly active. We quote: ½ lb. sections at 30c.; 1 lb. sections, 22@25c.; 2 lb. sections, 20@22c. Extracted, 10c. per lb. Good lots of extracted are wanted in kegs or barrels.
BEESWAX—Our supply is gone; we have none to quote.

CROCKER & BLAKE, 57 Chatham Street.

☞ If you want the earliest, largest and most prolific of any corn seed in America, write to the famous seed grower, H. C. Beebe, Canton, Ill., for explanatory circulars and engraving.

Ribbon Badges, for bee-keepers, on which are printed a large bee in gold, we send for 10 cts. each, or $8 per 100.